Mauritius Sugar Industry Research Institute

Rare crops of Mauritius: I. Winged bean

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The winged bean (Fr. *pois ailé, pois carré*) is a leguminous vegetable and pulse crop known under the formidable botanical name of *Psophocarpus tetragonolobus* (Family: Fabaceae). The plant is now rare in Mauritius. When the pods appear some in markets, e.g. open fair of Quatre Bornes, they are quite expensive.

Although attention was drawn to the winged bean's potential as early as 1975 (National Academy of Sciences, USA: *under-exploited tropical plants with promising economic value*), little has been done here to popularise it. Yet, it has many characteristics of interest for use in the home garden:

1. All the plant parts are edible: leaves, flowers, pods, seeds (rich in protein) and even, tuberous roots. In Mauritius, people mainly consume the young, tender pods. They are sliced and cooked just like green beans.

2. The plant is a twining vine, which behaves like a perennial under our conditions. The best period for planting is in the summer from December to January. The plant develops rapidly and, if it is provided with a support, it can climb to several metres. It flowers continuously as from March, when the days become short, up to about September, when flowering stops and the vines become dormant and dry out. However, the larger stems resprout again with the summer rains.

Figure 1. Young pods of winged bean on vine

3. It produces pods over about six months every year. The young pods should be picked very regularly before they become fibrous, starting at one week after flower opening.

4. The dry seeds can also be consumed as a pulse, after soaking for 12 hours and boiling in a pressure cooker.

Figure 2. Dry pods and seeds of winged bean

5. It has no serious pests and diseases.

6. It grows in most soils. It is a very effective nitrogen-fixing legume and can, therefore, be used to restore soil fertility. However, it is too aggressive to be used as a cover crop.

7. It thrives in the humid and superhumid regions with more than 1600 mm of annual rainfall.

Small packets of seeds can be obtained from MSIRI. Requests should be addressed to the Head, Food Crop Agronomy Department. Seeds have also been given to Barkly Experiment Station for multiplication.